

# Space Control

## DENY ADVERSARIAL USE OF SPACE CAPABILITIES

The objective of space control is to ensure access to space assets and information, and to deny adversaries the use of Space if required. This is obtained by the following four elements:

- Protection – Passive and active defense measures to ensure U.S. and friendly space systems perform as intended.
- Prevention – Measures to preclude an adversary's ability to use U.S. or third-party space systems and services for purposes hostile to the United States.
- Surveillance – Measures to monitor, detect, identify, track, assess, verify, categorize, and characterize objects and events in Space.
- Negation – Measures to deceive, deny, disrupt, degrade, or destroy space systems and services.

### Benefits to the Objective Force

Space control supports many of the essential and enabling capabilities defined in the Total Army Plan.

- Enhances force survivability.
- Allows for undetected deployment and staging of forces.
- Denies the adversary the capability to observe our actions.
- Denies targeting data, thus reducing adversary lethality.
- Maintains element of surprise.
- Denies the adversary the capability to communicate and navigate via space.
- Ensures freedom of maneuver and information dominance.

### Description

The Army Transformation vision of a more responsive force capable of full spectrum dominance to meet threats whenever and wherever they arise is now more reliant on space capabilities. Space control is the means by which space superiority is gained and maintained to ensure friendly forces can use the space environment while denying its use to the enemy. Space control has gained much importance with the increase of foreign government, consortium, and commercial space-based assets that provide readily available, high resolution imaging, surveillance, and reconnaissance services as well as numerous global multi-path communication channels. Potential adversaries have a rapidly growing capability to access space assets to identify, assess, and target Objective Force activities and operations and use this data with increased precision and timeliness. This situation will significantly enhance adversarial intelligence and battle space awareness thus compromising the survivability, agility, versatility,

and information superiority of the Objective Force. Army space control is envisioned with a systems approach around a core element set consisting of a sensor, shooter, and command and control node, which will function in the aggregate under the Battle Management, Command, Control, Communications, Computers, and Intelligence (BMC4I) structure supporting the Objective Force land combat commander.

### Core Elements

#### *Sensor*

Advanced Space Surveillance characterizes platform and sensor motions onboard Low Earth Orbit imaging platforms in real time using in-theater radar. It supports real-time imaging denial over an area of operations/interests. This technology will further capitalize on the lessons learned and knowledge gained from the Army-funded initial Space Surveillance Science and Technology Objective (STO) capability.

#### *Shooters*

Aerospace Control provides an in-theater mobile system to deny hostile aerospace imaging, surveillance, and reconnaissance threats. In addition, Army ground-based electronic warfare systems provide protection against hostile space-based communication threats. These capabilities provide increased survivability, responsiveness, and versatility (denial of adversary space-based capabilities) for the Objective Force.

#### *BMC4I*

The Decision Support System (DSS) develops and integrates BMC4I for all space control elements. The DSS fuses, models, and predicts space situations with optimized engagement planning. It also provides enhanced decision support system response time and decision error rate. This technology will re-use and expand upon technologies already developed from demonstrated programs.

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